

P **Laurus nobilis**

Common Name(s)

Bay, Bay Laurel, Bayleaf, Grecian Laurel, Laurel, Sweet Bay

How Used

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Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	(+)-ACTINODAPHNINE	Leaf	--	--		
0	(+)-ACTINODAPHNINE	Stem Bark	--	--		
0	(+)-ACTINODAPHNINE	Root	--	--		
0	(+)-BOLDINE	Leaf	--	--		
30	(+)-CATECHIN	Leaf	--	--		
0	(+)-CRYPTODORINE	Leaf	--	--		
7	(+)-GALLOCATECHIN	Leaf	--	--		
0	(+)-ISODOMESTICINE	Leaf	--	--		
0	(+)-LAUNOBINE	Leaf	--	--		
0	(+)-LAUNOBINE	Stem Bark	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	(+)-LAUNOBINE	Root	--	--		
0	(+)-LIMONENE	Leaf Essent. Oil	--	29000		
0	(+)-LINALOOL	Leaf Essent. Oil	--	--		
0	(+)-N-METHYL-ACTINODAPHNINE	Leaf	--	--		
0	(+)-NANDIGERINE	Leaf	--	--		
0	(+)-NEOLITSINE	Leaf	--	--		
0	(+)-NOR-ISODOMESTICINE	Leaf	--	--		
0	(+)-RETICULINE	Leaf	--	--		
0	(+)-RETICULINE	Stem Bark	--	--		
0	(-)-ALPHA-PINENE	Fruit Essent. Oil	--	--		
0	(-)-ALPHA-TERPINEOL	Leaf Essent. Oil	--	--		
0	(-)-BETA-PINENE	Fruit Essent. Oil	--	--		
38	(-)-EPICATECHIN	Leaf	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
21	(-)-EPIGALLOCATECHIN	Leaf	--	--		
0	(-)-LINALOOL	Leaf	--	--		
0	(E)-SABINENE-HYDRATE	Leaf	7	100	Tucker, et al, EB46(1):21-24.1992	
0	(Z)-P-MENTH-2-EN-1-OL	Leaf	4	65		
67	1,8-CINEOLE	Leaf	375	15000	2.6596919560245604	
67	1,8-CINEOLE	Leaf Essent. Oil	211400	620000	1.287251771450938	
67	1,8-CINEOLE	Fruit Essent. Oil	228000	283700	-0.8958928253130353	
67	1,8-CINEOLE	Essential Oil	--	--		
0	1-EPI-BICYCLOSESQUIPHELLANDRENE	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
0	1-PENTEN-3-OL	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
0	11-HYDROXYTRIACONTAN-9-ONE	Fruit	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	2-ETHYL-FURAN		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-METHYL-BUTANAL		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-METHYL-PROPANOL		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-METHYL-PROPIONIC-ACID		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-METHYL-PROPYL-2-METHYL-PROPIONATE		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-METHYLETHYL-2-METHYLPROPIONATE		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	2-METHYLPROPYL-ACETATE	Leaf	--	--	Lawrence, B.M., Essential Oils	1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	3,4-DIMETHOXY-ALLYL-BENZENE	Leaf	--	--		
0	3-METHYL-BUTANAL	Leaf	--	--	Lawrence, B.M., Essential Oils	1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	3-METHYL-BUTANOL	Leaf	--	--	Lawrence, B.M., Essential Oils	1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	4-TERPINEOL	Leaf Essent. Oil	--	--		
0	8-ACETOXYCARVOTANACETONE	Leaf	--	--	Lawrence, B.M., Essential Oils	1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
16	ACETIC-ACID	Leaf	--	--	Lawrence, B.M., Essential Oils	1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	ACETOEUGENOL		Leaf	1	42	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	ACETONE		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	ACETYL-EUGENOL		Leaf Essent. Oil	--	--	
2	ACTINODAPHNINE		Bark	--	100	
2	ACTINODAPHNINE		Wood	--	--	
2	ACTINODAPHNINE		Stem Bark	--	--	
0	ALLO-AROMADENDRENE		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-AMORPHENE		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-BOURBONENE		Plant	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	ALPHA-CADINENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-CARYOPHYLLENE	Fruit Essent. Oil	--	--		
0	ALPHA-COPAENE	Plant	--	--		
0	ALPHA-CUBEBENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-GUAIENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-GUAIENE	Leaf Essent. Oil	--	--		
0	ALPHA-GURJUNENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	ALPHA-MUROLENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	ALPHA-PHELLANDRENE	Leaf	10	120	-0.22922005050208058	
11	ALPHA-PHELLANDRENE	Leaf Essent. Oil	--	--		
11	ALPHA-PHELLANDRENE	Fruit Essent. Oil	--	100700	1.1856174256264056	
28	ALPHA-PINENE	Leaf	--	125	-0.21642895495470849	
28	ALPHA-PINENE	Leaf Essent. Oil	1300	76600	-0.3317578595752018	
28	ALPHA-PINENE	Fruit Essent. Oil	--	93000	0.38198728895825224	
28	ALPHA-PINENE	Flower	--	--	-0.8461946767360643	
28	ALPHA-PINENE	Bark	--	27	-1	
28	ALPHA-PINENE	Wood	--	--		
3	ALPHA-SELINENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
13	ALPHA-TERPINENE	Leaf	14	300	-0.1573418694572951	
13	ALPHA-TERPINENE	Leaf Essent. Oil	--	--		
23	ALPHA-TERPINEOL	Leaf	140	1380	1.8321956980210965	
23	ALPHA-TERPINEOL	Leaf Essent. Oil	4000	92700	1.0083241708956292	
23	ALPHA-TERPINEOL	Fruit Essent. Oil	--	58500	1.7711701171427547	
0	ALPHA-TERPINEOL ACETATE	Leaf Essent. Oil	38000	71400	1.3978316223846603	
0	ALPHA-TERPINOLENE	Leaf Essent. Oil	--	--		
0	ALPHA-TERPINYL-ACETATE	Leaf	540	1000	1.7299987299076585	
0	ALPHA-TERPINYL-FORMATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-THUJENE	Leaf	--	5.7	-0.5610992820608867	
0	ALPHA-THUJENE	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	ALPHA-THUJENE	Flower	--	12.6	-0.9999999999999996	
0	ALPHA-THUJENE	Bark	--	--		
0	ALPHA-THUJENE	Wood	--	--		
0	ALPHA-YLANGENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	ARTECANIN	Leaf	--	--		
1	ARTEMORIN	Leaf	140	5000		
7	ASTRAGALIN	Leaf	--	--		
0	BASSORIN	Plant	--	--		
24	BENZALDEHYDE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
6	BETA-BISABOLENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BETA-CARYOPHYLLENE	Leaf	4	180	-0.24669811339827577	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	BETA-CARYOPHYLLENE	Leaf Essent. Oil	--	200	-0.4048138384151673	
0	BETA-CUBEBENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	BETA-ELEMENE	Plant	--	--		
5	BETA-ELEMENE	Leaf Essent. Oil	--	--		
13	BETA-EUDESMOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	BETA-EUDESMOL	Leaf Essent. Oil	--	--		
2	BETA-MYRCENE	Leaf Essent. Oil	--	--		
3	BETA-PHELLANDRENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	BETA-PINENE	Leaf	130	2080	2.63885283535404	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
13	BETA-PINENE	Leaf Essent. Oil	1600	54000	1.5747827512922534	
3	BETA-SELINENE	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
47	BETA-SITOSTEROL	Leaf	--	1450	-0.2944657138376137	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
0	BICYCLOGERMACRENE	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
0	BICYCLOSESQUIPHELLANDRENE	Plant	--	--		
29	BOLDINE	Leaf	--	--	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
35	BORNEOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
35	BORNEOL	Leaf Essent. Oil	--	4700	-0.6211151011481656	
0	BORNEOL-ACETATE	Leaf Essent. Oil	--	--		
12	BORNYL-ACETATE	Plant	--	--		
4	BORON	Leaf	9	16	-1.2328645872256474	Betting on Boron, Unpublished draft by J. A. Duke on file at USDA, draft and papers relating to boron percentages. Includes Internat. Z. Vit. Ern. Forschung 43:1973 (boron).
0	BUTANAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	BUTANOL		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
6	BUTYRIC-ACID		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CADINA-1(6),5-DIENE		Plant	--	--	
0	CADINA-1(6),5-DIENE		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CADINA-3,5-DIENE		Plant	--	--	
0	CADINA-3,5-DIENE		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
102	CAFFEIC-ACID		Fruit	--	--	
102	CAFFEIC-ACID		Leaf	--	--	
0	CALAMENE		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
2	CAMPESTEROL	Leaf	--	60	-0.5558506974492348	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
9	CAMPHENENE	Leaf	24	186	-0.1223873321341401	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	CAMPHENENE	Leaf Essent. Oil	--	7000	-0.6281133210860443	
41	CAMPHOR	Plant	--	--		
41	CAMPHOR	Leaf Essent. Oil	--	--		
1	CAPROIC-ACID	Plant	--	--		
1	CAPROIC-ACID	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
5	CAPRYLIC-ACID	Plant	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	CAR-3-ENE	Leaf Essent. Oil	--	--		
37	CARVACROL	Leaf Essent. Oil	--	--		
19	CARVONE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	CARYOPHYLLENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	CARYOPHYLLENE-OXIDE	Plant	--	--		
1	CATECHINS	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
18	CINNAMIC-ACID	Fruit	--	--		
18	CINNAMIC-ACID	Leaf	--	--		
18	CINNAMIC-ACID	Fruit Essent. Oil	--	90000		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	CINNAMIC-ACID-METHYL-ESTER	Fruit Essent. Oil	--	172000		
3	CINNAMYL-ACETATE	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
0	CIS-3-HEXANOL	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
1	CIS-3-HEXENOL	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
0	CIS-ALPHA-BISABOLENE	Plant	--	--		
3	CIS-OCIMENE	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
0	CIS-P-MENTH-2-EN-1-OL	Leaf	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	CIS-P-MENTHA-2,8-DIEN-1-OL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-SABINENE-HYDRATE	Leaf	--	--		
0	CIS-THUJ-2-EN-4-OL	Leaf	--	--		
53	CITRAL	Leaf	--	--		
53	CITRAL	Fruit Essent. Oil	--	--		
12	COPPER	Leaf	4	4	-0.6510387463181428	USDA's Ag Handbook 8 and sequelae)
9	COSTUNOLID	Leaf	1191	18000		
9	COSTUNOLID	Fruit	--	2560		
9	COSTUNOLID	Root	--	3100		
0	CUBEBENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CUMAMBRIN-A	Leaf	--	--		
2	CUMAMBRIN-B	Leaf	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	CUMINYL-ALCOHOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
7	CYANIDIN	Plant	--	--		
0	CYCLOSATIVENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	DEACETYL LAURENOBIOLIDE	Leaf	--	50		
0	DEACETYL MATORICARIN	Leaf	--	--		
0	DEHYDRO-1,8-CINEOLE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DEHYDRO-1,8-CINEOLE	Essential Oil	--	--		
4	DEHYDROCOSTUS-LACTONE	Leaf	--	--		
4	DEHYDROCOSTUS-LACTONE	Fruit	--	14000		
8	DELTA-3-CARENE	Leaf	15	162	2.232520909065303	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
9	DELTA-CADINENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	DELTA-CADINENE	Leaf Essent. Oil	--	--		
0	DESACETYLLAURENOBIOLIDE	Leaf	60	60		
0	DIHYDROPARTHENOLIDE	Leaf	--	--		
0	DOCOSAN-1-OL-TETRADECANOATE	Fruit	--	--		
0	E-PINOCARVEOL	Leaf	25	125	Tucker, et al, EB46(1):21-24.1992	
16	ELEMICIN	Plant	--	--		
0	ENANTHIC-ACID	Plant	--	--		
0	ENANTHIC-ACID	Leaf	--	--	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.	
0	EO	Fruit	10000	40000	-0.042481439666032995	
0	EO	Leaf	--	5700	-0.513248199424921	
0	EO	Flower	--	1800	-0.3633963855473398	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	EO	Bark	--	6800	-0.37118729728006783	
0	EO	Wood	--	700	-1.3424749827061675	
4	EREMANTHIN	Fruit	--	14000		
12	ESTRAGOLE	Leaf Essent. Oil	--	--		
0	ETHYL-2-METHYL-PROPIONATE	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
0	ETHYL-PENTANOATE	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
76	EUGENOL	Leaf	18	1335	-0.6593393775367795	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
76	EUGENOL	Essential Oil	--	--		
76	EUGENOL	Leaf Essent. Oil	--	10200	-1.023260533180429	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
1	EUGENOL-ACETATE	Leaf Essent. Oil	--	5000	-1	
5	EUGENOL-METHYL-ETHER	Essential Oil	--	--		
5	EUGENOL-METHYL-ETHER	Leaf Essent. Oil	5000	77000	-1	
6	EUGENYL-ACETATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	FAT	Fruit	200000	550000	3.5596036699730003	
13	FORMIC-ACID	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-CADINENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-ELEMENE	Plant	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	GAMMA-MUROLENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	GAMMA-TERPINENE	Leaf	35	137	0.1872301001508422	
11	GAMMA-TERPINENE	Leaf Essent. Oil	--	1700	-0.7023439508515464	
35	GERANIOL	Fruit	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
35	GERANIOL	Leaf	--	--		
35	GERANIOL	Leaf Essent. Oil	--	13000	-1.1455624970792637	
0	GERANIOL-ACETATE	Leaf Essent. Oil	--	--		
5	GERANYL-ACETATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	GERMACRANOLIDES	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
3	GUAIJAVERIN	Leaf	--	--		
0	GUM	Plant	--	--		
0	HEX-CIS-3-EN-1-OL-O-XYLOSIDER	Leaf	--	16		
0	HEXADECANE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	HEXANAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	HEXANOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	HUMULENE	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
2	ISOBUTYRIC-ACID		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ISODOMESTICINE		Leaf	--	--	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
22	ISOQUERCITRIN		Leaf	--	--	
1	JUGLANIN		Leaf	--	--	
75	KAEMPFEROL		Plant	--	--	
0	KAEMPFEROL-3-O-ALPHA-L-(2'',4''-CIS-P-COUMAROYL)-RHAMNOSIDE		Leaf	--	21	
0	KAEMPFEROL-3-O-ALPHA-L-(2'',4''-TRANS-P-COUMAROYL)-RHAMNOSIDE		Leaf	--	3.3	
0	KAEMPFEROL-3-O-ALPHA-L-(3'',4''-DI-TRANS-P-COUMAROYL)-RHAMNOSIDE		Leaf	--	20	
0	KAEMPFEROL-3-O-ALPHA-L-GALACTOSIDE		Leaf	--	--	
0	KAEMPFEROL-3-O-ALPHA-L-RHAMNOSIDE		Leaf	--	--	
0	KAEMPFEROL-3-O-BETA-D-RUTINOSIDE		Leaf	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	LAUNDOBINE	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	LAUNOBINE	Plant	--	--		
1	LAURENOBIOLIDE	Plant	--	--		
1	LAURENOBIOLIDE	Root	600	2000		
1	LAURENOBIOLIDE	Leaf	--	--		
0	LAURENOLIDE	Leaf	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
0	LAURENONIOLIDE	Root	--	--		
7	LAURIC-ACID	Fruit	60000	192500	1.9272892561696446	
0	LEDENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
1	LEUCOCYANIDIN	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
60	LIMONENE	Leaf	55	500	0.07821612616499558	
60	LIMONENE	Leaf Essent. Oil	--	--		
0	LINALOL	Leaf	800	3340	1.5357435137562112	
53	LINALOOL	Leaf	20	3340	1.6654663919658252	
53	LINALOOL	Essential Oil	--	--		
53	LINALOOL	Leaf Essent. Oil	4000	183700	0.46735098325491625	
0	LINALOOL-ACETATE	Leaf Essent. Oil	--	--		
27	LINOLEIC-ACID	Plant	--	--		
27	LINOLEIC-ACID	Fruit	36000	176000	2.127693140200353	
0	LINOLENIC-ACID	Plant	--	--		
14	MANGANESE	Leaf	82	82	-0.3235642905289543	USDA's Ag Handbook 8 and sequelae)
18	MANNITOL	Root	--	6422	-1.3246166156133767	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
2	METHANOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	METHYL-CINNAMATE	Fruit	--	--		
20	METHYL-EUGENOL	Leaf	20	2608	-0.4181165295687271	
0	METHYL-HEPTENONE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
22	MYRCENE	Leaf	5	320	-0.0572027272100166	
22	MYRCENE	Leaf Essent. Oil	--	46800	-0.1845827373674177	
5	MYRTENAL	Leaf	18	90	1.2943376979698786	
2	MYRTENOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	N-DECANE	Leaf Essent. Oil	--	--		
0	N-NONANE	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	N-TRIDECANE	Leaf Essent. Oil	--	--		
0	N-UNDECANE	Leaf Essent. Oil	--	--		
0	NANDIGERINE	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	NEOLITSINE	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
4	NERAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
10	NEROL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
5	NERYL-ACETATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
18	OLEIC-ACID	Plant	--	--		
18	OLEIC-ACID	Fruit	66000	220000	1.2148685350373452	
25	P-COUMARIC-ACID	Fruit	--	20	-0.6771858047250778	
25	P-COUMARIC-ACID	Leaf	--	192	-0.2995654865435739	
16	P-CYMENE	Leaf	62	340	0.04851679017072622	
16	P-CYMENE	Leaf Essent. Oil	--	198300	2.1686417177504986	
13	PALMITIC-ACID	Fruit	20000	60500	0.5763214413284119	
27	PARTHENOLIDE	Leaf	--	--		
0	PELARGONIC-ACID	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PENTANAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	PENTANOIC-ACID		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PENTANOL		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PENTYL-ACETATE		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
14	PERILLYL-ALCOHOL		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PHELLANDRAL		Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
2	PHENYLHYDRAZINE	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
2	PHYTOSTEROLS	Seed	--	1510	-0.23598595676506973	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
1	PINOCARVONE	Leaf	35	170	1.5478706392651775	Tucker, et al, EB46(1):21-24.1992
10	PIPERIDINE	Leaf	--	--		
34	PROANTHOCYANIDINS	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
1	PROCYANIDIN-B-2	Leaf	--	--		
4	PROCYANIDIN-B-4	Leaf	--	--		
0	PROCYANIDIN-B-5	Leaf	--	--		
0	PROCYANIDIN-B-7	Leaf	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
6	PROPYONIC-ACID	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
176	QUERCETIN	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	QUERCETIN-3-O-ALPHA-L-GALACTOSIDE	Leaf	--	--		
44	QUERCITRIN	Leaf	--	--		
10	RETICULINE	Leaf	--	--		
1	REYNOSIN	Leaf	67	2500		
0	RIDENTIN-B	Leaf	--	--		
0	ROTHIN-B	Leaf	--	--		
87	RUTIN	Leaf	--	--		
5	SABINENE	Leaf	25	2650	1.4272110708644	
5	SABINENE	Leaf Essent. Oil	42000	82900	0.7545516886727462	
7	SALICYLATES	Leaf	10	25	-0.5226078387767185	
5	SANTAMARIN	Leaf	--	73		
3	SANTAMARINE	Leaf	44	1500		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	SCHIZANDRASIDE	Leaf	--	24		
0	SPATHULENOL	Leaf Essent. Oil	--	--		
23	TERPINEN-4-OL	Leaf	190	1380	0.44764477349717596	
23	TERPINEN-4-OL	Leaf Essent. Oil	7800	22000	-0.3624984026500584	
23	TERPINEN-4-OL	Essential Oil	--	--		
18	TERPINEOL	Fruit Essent. Oil	--	109000	1	
9	TERPINOLENE	Leaf	4	200	0.022680174029978174	
5	TERPINYL-ACETATE	Essential Oil	--	--		
0	TETRADECANE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	THUJ-2-EN-4-OL	Leaf	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
71	THYMOL	Leaf Essent. Oil	--	--		
1	TOLUENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	TRANS-2-HEXENAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	TRANS-CARVEOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	TRANS-METHYL-EUGENOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-OCIMENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	TRANS-PINOCARVEOL	Leaf Essent. Oil	--	--		
0	TRANS-SABINENE-HYDRATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRIDECANE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRILAUrin	Fruit	72000	132000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
2	TULIPINOLIDE	Root	--	--	
2	TULIPINOLIDE	Leaf	--	--	
1	VALERIANIC-ACID	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	VERLOTORIN	Leaf	90	1400	
1	VIRIDIFLOROL	Leaf	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	VISCIDULIN-C	Leaf	--	--	
0	ZALUZANIN-D	Fruit	--	3200	